



JC14 Rec'd PCT/PTO 30 APR 2002

PCT

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Heinrich Feichtinger

Serial No.: 10/088,056

Filed: March 13, 2002

Title: MIXTURE OF TWO PARTICULATE PHASES USED IN THE  
PRODUCTION OF A GREEN COMPACT THAT CAN BE SINTERED  
AT HIGHER TEMPERATURES

Docket No.: LUS-13047

LETTER  
ENGLISH TRANSLATION

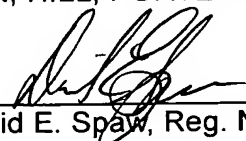
Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

Enclosed is an English translation of the International Preliminary  
Examination Report for filing in the above-identified application.

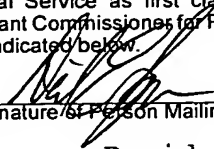
If there are any fees resulting from this communication, please charge the  
same to Deposit Account No. 18-0160, Order No. LUS-13047.

Respectfully submitted,  
RANKIN, HILL, PORTER & CLARK LLP

By   
David E. Spaw, Reg. No. 34732

700 Huntington Building  
925 Euclid Avenue  
Cleveland, Ohio 44115-1405  
(216) 566-9700  
Customer No. 007609

I hereby certify that this correspondence is being deposited with the  
United States Postal Service as first class mail in an envelope  
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20231 on the date indicated below.

  
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Signature of Person Mailing Paper  
4/17/02 David E. Spaw  
Date Printed Name of Person Mailing Paper

10. April 2002

## PATENT COOPERATION TREATY

## PCT

Translation



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 1762/PCT	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/CH99/00434	International filing date (day/month/year) 14 September 1999 (14.09.99)	Priority date (day/month/year) 14 September 1999 (14.09.1999)
International Patent Classification (IPC) or national classification and IPC B22F 3/11		
Applicant STRATEC MEDICAL AG		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 6 sheets, including this cover sheet.  
  
☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  
  
 These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand 23 March 2001 (23.03.01)	Date of completion of this report 13 December 2001 (13.12.2001)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH99/00434

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☐ the international application as originally filed
- ☒ the description:  
pages 1-3,5-13, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages 4, filed with the letter of 08 October 2001 (08.10.2001)
- ☒ the claims:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages 1-23, filed with the letter of 08 October 2001 (08.10.2001)
- ☐ the drawings:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☒ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH 99/00434

## 1. Basis of the report

1. This report has been drawn on the basis of *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.)*:

## CONTINUATION OF BOX I.5

The amendments filed with the letter of 27 September 2001 introduce substantive matter which goes beyond the original disclosure in the international application as filed, thereby contravening PCT Article 34. This concerns Claim 2, which is directed to a titanium compound in very general terms, although according to the original application the only titanium compound contained in the first phase is titanium hydride. Consequently, the original application does not disclose the generalisation of the present Claim 2 and this report has been established without taking Claim 2 into account.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/CH 99/00434

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	6, 8-12, 22-23	YES
	Claims	1, 3-5, 7, 13-19, 20, 21	NO
Inventive step (IS)	Claims	9, 10	YES
	Claims	1, 3-8, 11-23	NO
Industrial applicability (IA)	Claims	1, 3-23	YES
	Claims		NO

**2. Citations and explanations**

This report makes reference to the following documents:

- D1: DE-A-22 56 716 (GOETZEWERKE), 6 June 1974 (1974-06-06)
- D2: US-A-3 852 045 (WHEELER K. ET AL.), 3 December 1974 (1974-12-03)
- D3: DE-C-197 25 210 (ACCESS AACHENER CT FUER ERSTAR), 5 November 1998 (1998-11-05).

2.1 D1 (the claims) concerns a method for producing porous sintered materials using a powder mixture (page 3, line 22 - page 4, line 9). The powder mixture contains particles of iron or an iron alloy, low-melting alloys or compounds (page 3, line 24 - page 4, line 1, and Claim 5), particles of alkaline or alkaline earth metal salts, such as sodium chloride, and optionally titanium (page 4, line 4, and Claim 4). The salts do not react with the metal phase to be sintered. An alloy with a lower melting point can also be present to ensure a better bond (page 3, line 24 - page 4, line 1). Since the present Claim 1 concerns a mixture "of two particle phases" and does not exclude the presence of other phases (see also Claims 3-4), the claimed subject

matter cannot be distinguished from the powder mixture of D1. The subject matter of Claim 1 is therefore not novel.

2.2 The powder mixture of D1 is compressed and sintered. The salts are then removed by a dissolution process (page 3, lines 5-10). The subjects of independent Claims 13-15 and 19 are therefore not novel.

2.3 Furthermore, Claims 19 and 21 should be considered to concern products as such. The claimed products appear to be merely porous titanium-containing mouldings with a fine structure. Such products are also known from D2 (column 4, lines 15-28; column 5, line 61 - column 6, line 22).

2.4 The uses as per Claims 22-23 are customary uses which cannot substantiate an inventive step. The subjects of Claims 23-24 are therefore not inventive.

2.5 For the above reasons, the subjects of dependent Claims 3-5, 16-17 and 20 are not novel.

2.6 The metal particles of D1 necessarily contain an oxidised fraction. Consequently, the subject matter of Claim 7 is not novel.

2.7 The use of nitrides as a metallic compound (Claim 8) and of a low-melting alloy as a coating (Claim 11) is a customary measure which cannot substantiate an inventive step. The subjects of Claims 8 and 11 are therefore not inventive.

2.8 The use of a binder and the advantages achieved

thereby are known (see D3, Claim 1 and column 2, lines 28-39). The subjects of Claims 6 and 12 are therefore not inventive.

2.9 The use of a solvent as per Claim 18 in order to dissolve the salts of D1 appears to be customary. The subject matter of Claim 18 is therefore not inventive.

2.10 D1 does not disclose the use of hydride particles (Claims 9 and 10). This lowers the sintering temperature, enabling the internal surface and volume to be better preserved (page 6, line 21 - page 7, line 2). Hydrides decompose relatively easily and their decomposition product is hydrogen, which is a reducing and quickly removable gas (page 5, lines 24-29). This makes the production of open-pore metallic structures more efficient. The available prior art neither disclosed nor suggested the use of hydrides for solving this problem. The subjects of Claims 9 and 10 are therefore novel and inventive.